AC-V500

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SPECIFICATIONS

Power requirements	100 – 240 V AC, 50/60 Hz
Power consumption	18 W Charge mode: 23 VA (100 V AC), 33 VA (240 V AC) Operating mode: 25 VA (100 V AC), 34 VA (240 V AC)
Output voltage	DC OUT: 6.5 V, 1.5 A in operating mode Battery charge terminal: 8.4 V, 1.1 A in charge mode
Application	Sony battery pack NP-500
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	– 20°C to 60°C (– 4°F to 140°F)
Dimensions	Approx. 68 × 44 × 107 mm (w/h/d) ($2^{3}/_{4} \times 1^{3}/_{4} \times 4^{1}/_{4}$ inches) including projecting parts
Weight	Approx. 260 g (9.2 oz)
Cord length	AC power cord: 2 m Connecting cord: 2 m
Supplied accessory	Connecting cord (1)

Design and specifications are subject to change without notice.

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER SES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MICROFILM

AC POWER ADAPTOR

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splasher and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Check the B+ voltage to see it is at the values specified.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig.A)

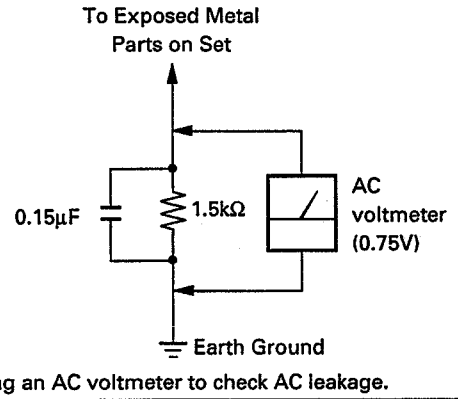


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

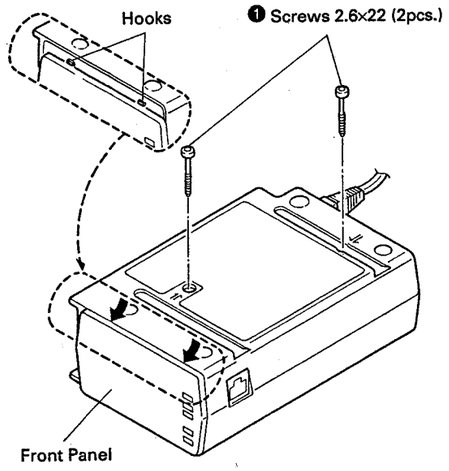
LES COMPOSANTS IDENTIFIÉS PAR UN TRAMÉ ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DU CIRCUIT QUI SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT SONT IDENTIFIÉS DANS CE MANUEL. SUIVRE LES PROCÉDURES QUAND LES COMPOSANTS CRITIQUES SONT REMPLACÉS OU LE FONCTIONNEMENT IMPROPRE EST SUSPECTÉ.

SECTION 1
DISASSEMBLY

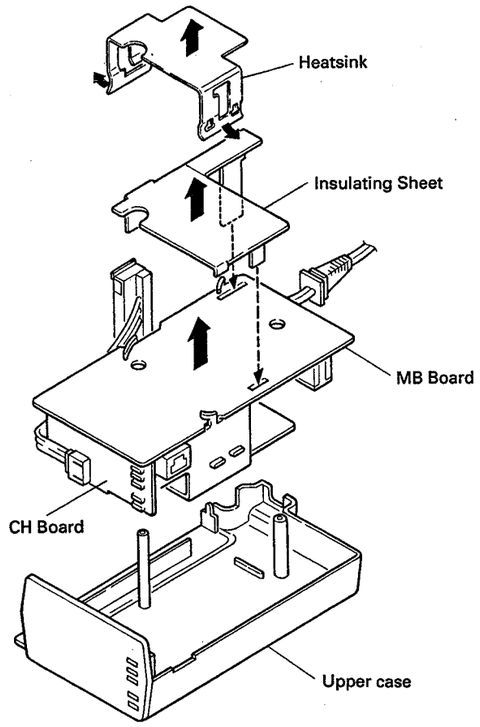
- **Remove the following devices shown by ❶, etc. In the order of the numbers.**

1-1. CASE

After unscrewing the 2 screws ❶ , remove the front panel while sliding the 2 hooks as shown by the arrows below.

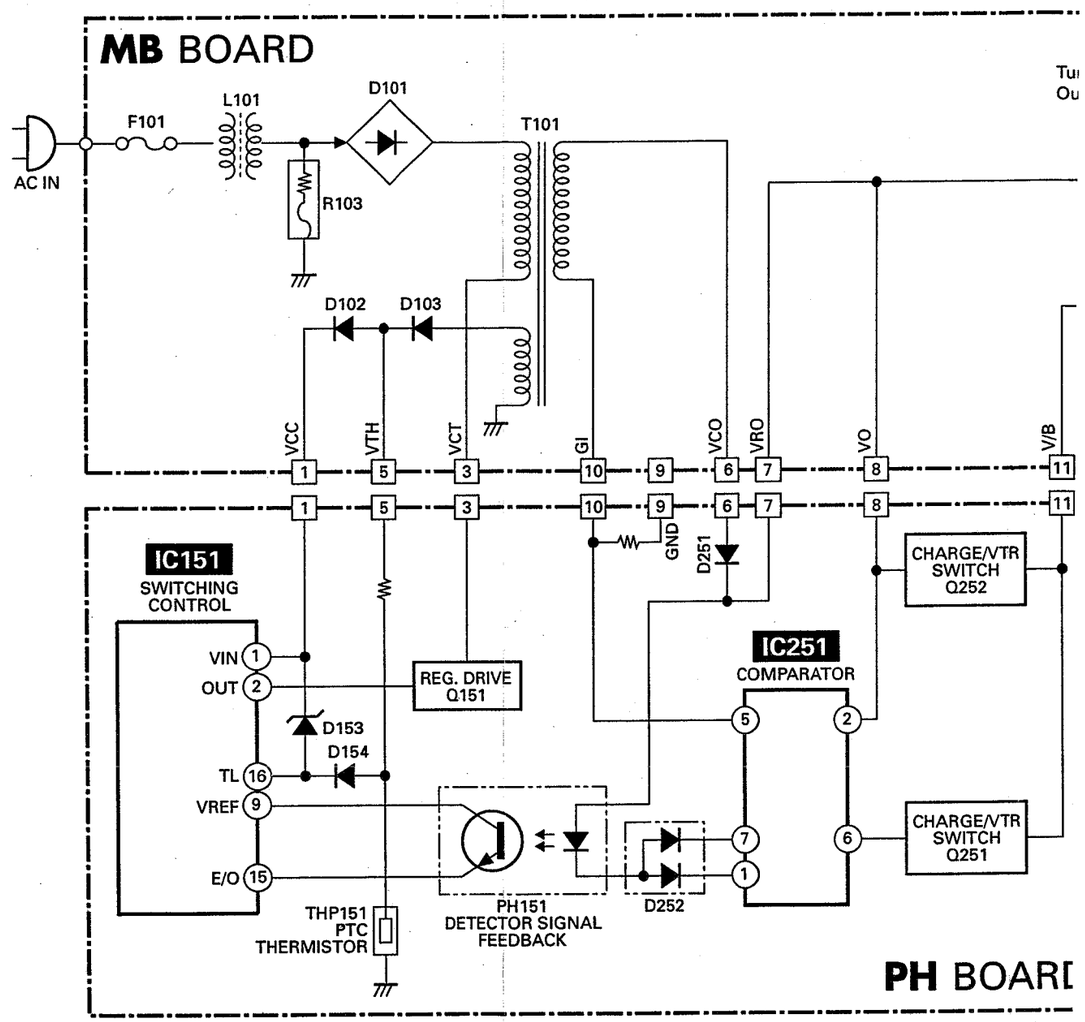


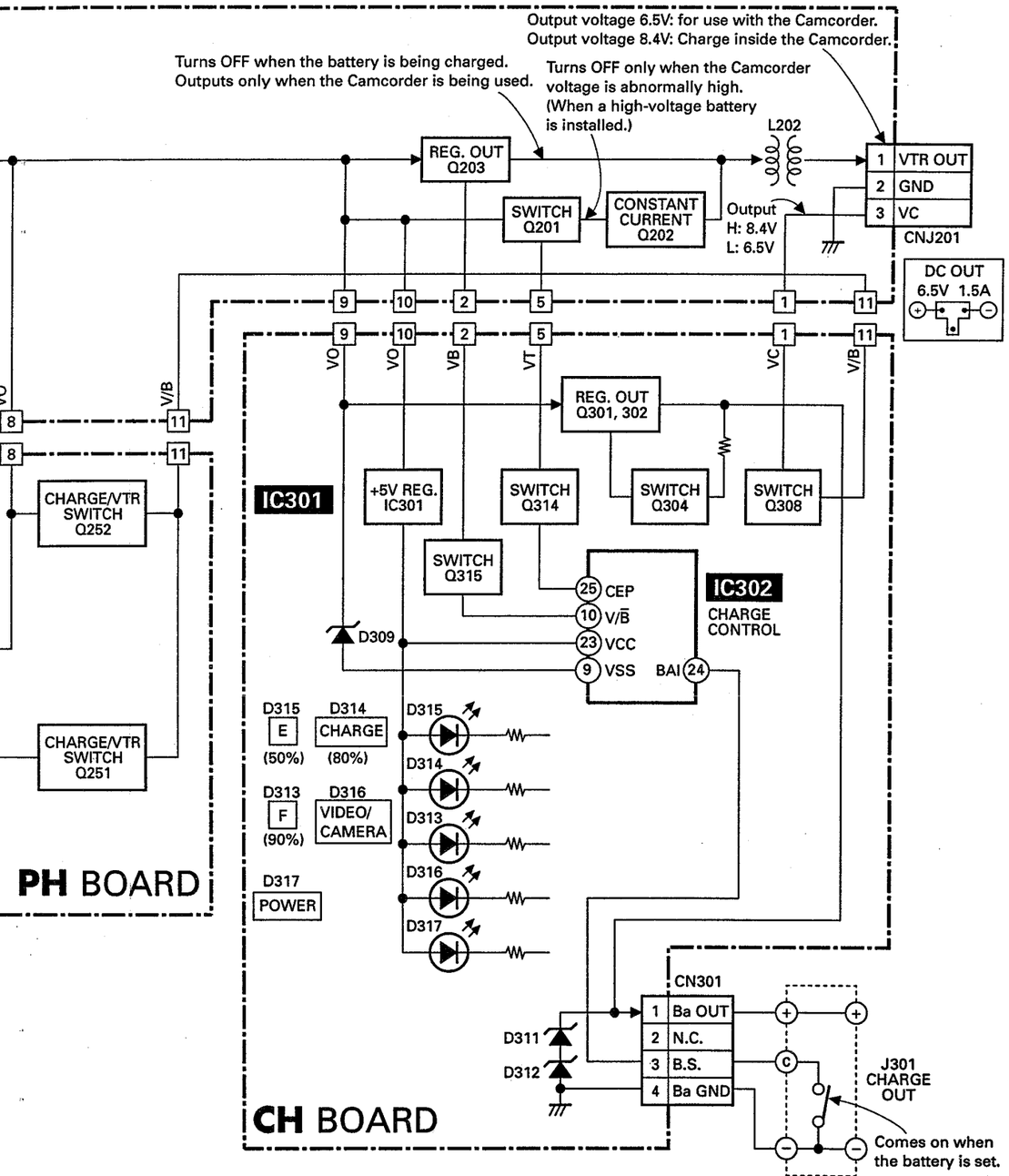
1-2. CH BOARD, MB BOARD



SECTION 2
DIAGRAMS

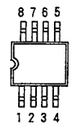
2-1. BLOCK DIAGRAM





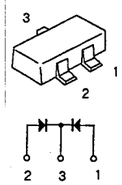
2-2. SEMICONDUCTOR LEAD LAYOUTS

BA10358F

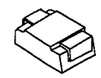


DTA114GS
2SA1175-HFE

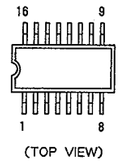
DAN202U



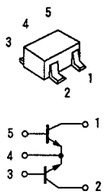
LN1351C
LN1451C
LN1851C



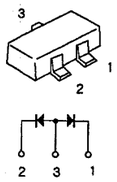
HA16107FP



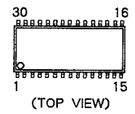
FMG1



DAP202U



MB88212



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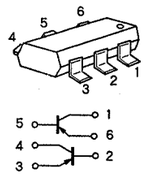
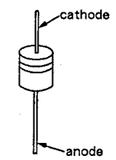
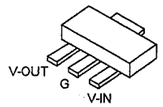


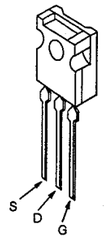
ERA22-08
1SR139-400
1SS119



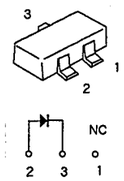
TA78DS05F



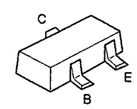
2SJ298



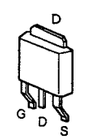
RD15M-B1
RD4.3M-B1
RD9.1M-B3



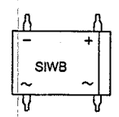
DTA114EUT106
DTC114EU
2SC1623-L5L6



2SJ299S-TR



S1WB60B



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For printed wiring boards:

- ○— : Indicated a lead wire mounted on the component side.
- — : Indicated a lead wire mounted on the conductor side.
- ■ : Parts mounted on the conductor side.
- ▭ : Printed resistor.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.*
- Circled numbers refer to waveforms.*
- (B) or (F), etc. of capacitors indicate the temperature characteristics.

Caution:	
Pattern face side: (Conductor side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component side)	Parts on the parts face side seen from the parts face are indicated.

For schematic diagram:

- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minuts side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W (Chip resistors: 1/10W) unless otherwise noted.
  kΩ: 1000Ω, MΩ: 1000kΩ
- All capacitors are in μF unless otherwise noted. pF: μμF 50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ▭ : Nonflammable resistor
- ▭ : Fusible resistor
- ▭ : Printed resistor.
- ▭ : Panel designation
- △ : Internal component
- B+ : B + Line
- ▭ : Adjustment for repair
- Voltages are DC between measurement points and ground unless otherwise noted.*
- Readings are taken with a color-bar signal input.*
- Readings are taken with a digital multimeter (DC10MΩ).*
- Voltage variations may be noted due to normal production tolerances.*
- Circled numbers refer to waveforms

- * : Indicated by the color red

When indicating parts by reference number, please include the board name.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safetry.
Replace only with part number specified.

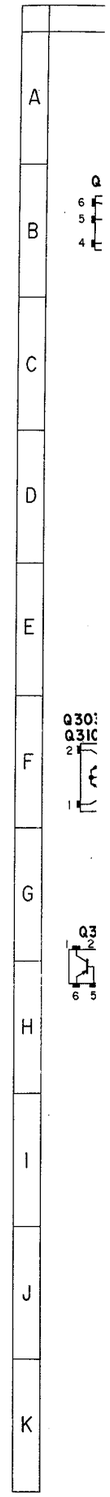
Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

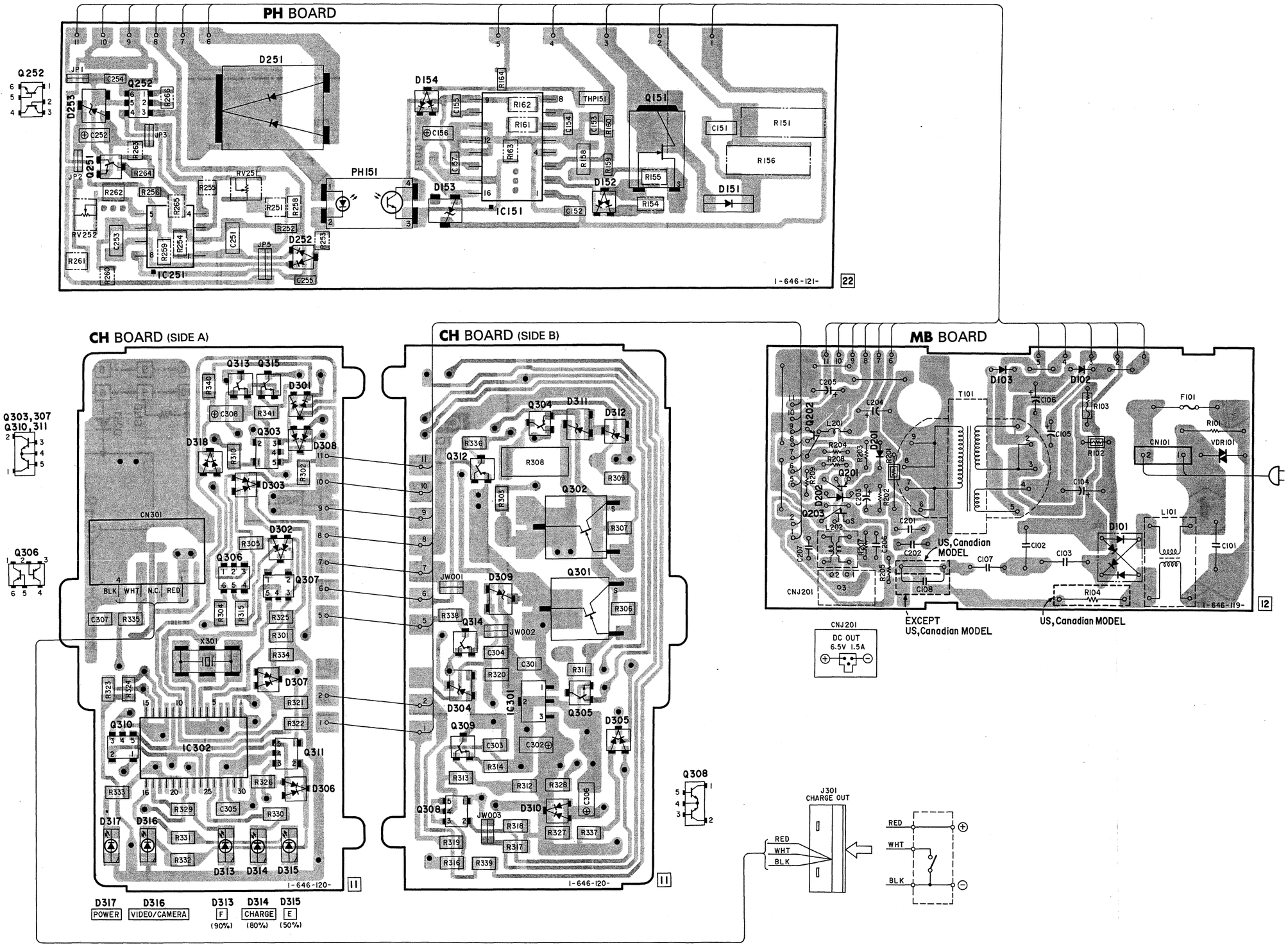
2-3. PRINTED WIRING BOARDS

• See page 6 for semiconductor lead layouts.

● SEMICONDUCTOR LOCATION

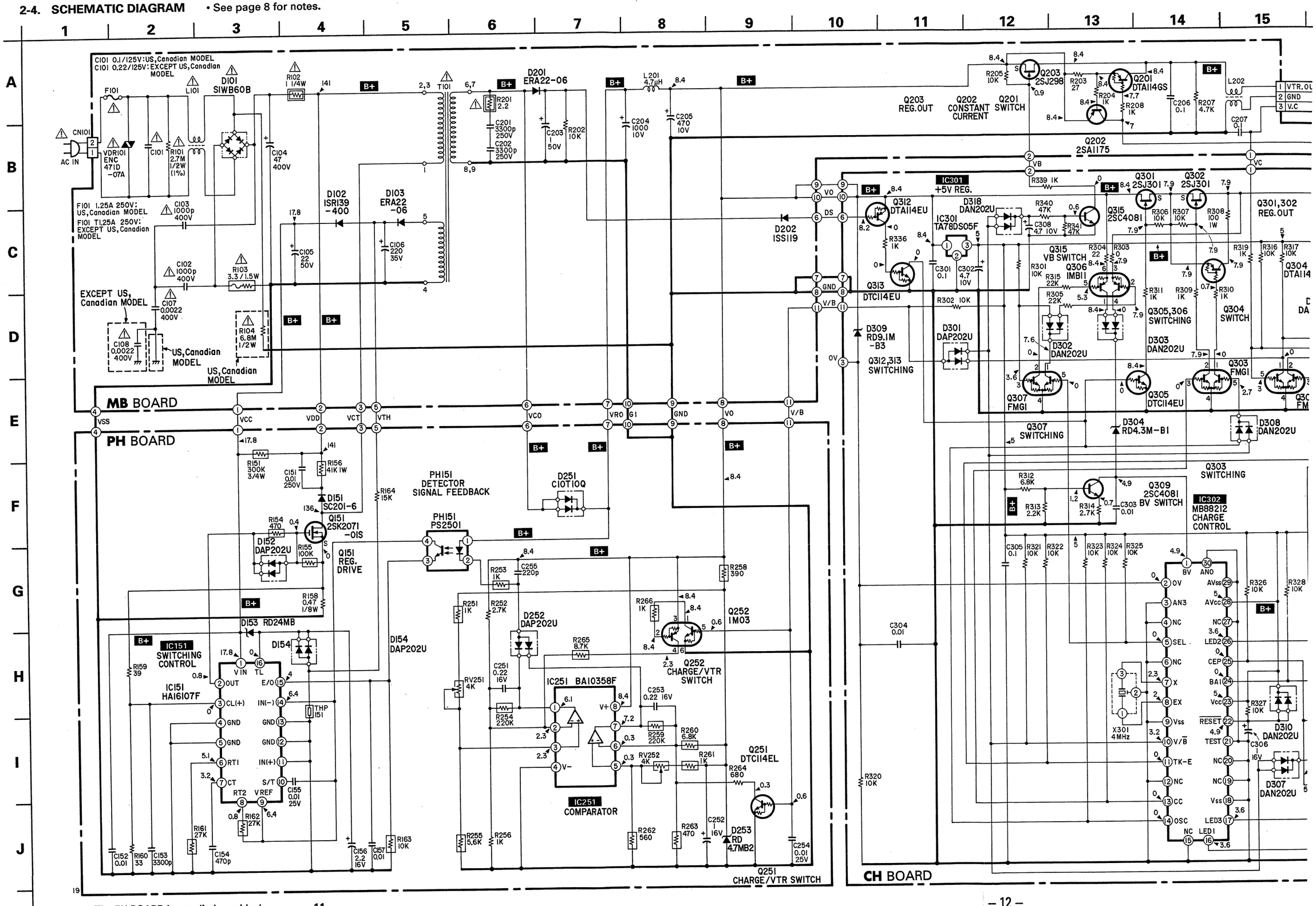
Ref.No.	Location	Ref.No.	Location
D101	F-11	IC151	B-5
D102	D-10	IC251	C-2
D103	D-10	IC301	G-5
D151	B-7	IC302	G-2
D152	B-6		
		PH151	B-4
D153	C-5		
D154	B-4	Q151	B-7
D201	E-9	Q201	E-8
D202	E-8	Q202	E-8
D251	A-3	Q203	E-8
		Q251	B-1
D252	C-3		
D253	B-1	Q252	B-2
D301	D-3	Q301	F-6
D302	F-3	Q302	E-6
D303	E-3	Q303	E-3
		Q304	E-6
D304	G-5		
D305	G-6	Q305	G-6
D306	H-3	Q306	F-3
D307	G-3	Q307	F-3
D308	E-3	Q308	H-5
		Q309	G-5
D309	F-5		
D310	H-6	Q310	G-2
D311	E-6	Q311	H-3
D312	E-6	Q312	E-5
D313	H-3	Q313	D-3
		Q314	F-5
D314	H-3		
D315	H-3	Q315	D-3
D316	H-2		
D317	H-2		
D318	E-2		




PH BOARD
1-646-121-
22
CH BOARD (SIDE A)
CH BOARD (SIDE B)
1-646-120-
11
MB BOARD
US, Canadian MODEL
EXCEPT US, Canadian MODEL
1-646-119-
12
CNJ201
DC OUT 6.5V 1.5A
J301 CHARGE OUT
RED
WHT
BLK
AC IN
Q252
Q303,307 Q310,311
Q306
Q308
D317 POWER
D316 VIDEO/CAMERA
D313 F (90%)
D314 CHARGE (80%)
D315 E (50%)
19

2-4. SCHEMATIC DIAGRAM

• See page 8 for notes.



* The PH BOARD is supplied as a block.

8 9 10 11 12 13 14 15 16 17 18 19

L201 4.7μH
C205 470 10V
B+
Q203 REG.OUT
Q202 CONSTANT CURRENT
Q201 SWITCH
Q203 2SJ298
Q201 DTA114GS
R205 10K
R203 27
R204 1K
R208 1K
C206 0.1
R207 4.7K
L202
C207 0.
CNJ201 DC OUT 6.5V 1.5A
1 VTR.OUT
2 GND
3 V.C
R209 10K
Q202 2SA1175
VB
VC
VT
IC301 +5V REG.
R339 1K
Q301 2SJ301
Q302 2SJ301
Q301,302 REG.OUT
D311 RD15M-B
D312 RD15M-B
CN301
Ba OUT
N.C
B.S
Ba GND
Batt+
Batt−
J301
J301 CHARGE OUT
VO
DS
GND
V/B
D202 ISS119
Q312 DTA114EU
D318 DAN202U
IC301 TA78DS05F
R340 47K
C308 4.7 10V
R341 47K
Q315 2SC4081
R336 1K
C301 0.1
C302 4.7 10V
Q313 DTC114EU
Q315 VB SWITCH
Q306 IMB11
R301 10K
R315 22K
R305 22K
R304 22
R303 0
R306 10K
R307 10K
R308 100 1W
R319 1K
R316 10K
R317 10K
R318 10K
R335 1K
Q304 DTA114EU
D305 DAN202U
R311 1K
R309 1K
R310 1K
Q305,306 SWITCHING
Q304 SWITCH
R302 10K
D309 RD9.1M-B3
Q312,313 SWITCHING
D301 DAP202U
D303 DAN202U
D302 DAN202U
C307 0.01
R338 0
Q314 DTC114EU
Q303 FMG1
Q307 FMG1
Q305 DTC114EU
Q308 FMG1
Q310 FMG1
Q307 SWITCHING
D304 RD4.3M-B1
D308 DAN202U
Q308,310 SWITCHING
Q314 VT SWITCH
Q303 SWITCHING
R312 6.8K
R313 2.2K
R314 2.7K
C303 0.01
Q309 2SC4081 BV SWITCH
IC302 MB88212 CHARGE CONTROL
D313 F (90%)
D314 CHARGE (80%)
D315 E (50%)
D316 VIDEO/CAMERA
D317 POWER
C305 0.1
R321 10K
R322 10K
R323 10K
R324 10K
R325 10K
R326 10K
R328 10K
R334 10K
R329 1K
R330 1K
R331 1K
R332 1K
R333 1K
D313-315 LN1451C
D316 LN1851C
D317 LN1351C
C304 0.01
R320 10K
X301 4MHz
R327 10K
D310 DAN202U
C306 16V
D307 DAN202U
D306 DAN202U
Q311 FMG1 LED DRIVE
BV
ANO
OV
AN3
NC
SEL
X
EX
Vss
V/B
TK-E
CC
OSC
AVss
AVcc
LED2
CEP
BA1
Vcc
RESET
TEST
LED3
LED1
R258 390
Q252 1M03
Q252 CHARGE/VTR SWITCH
C253 0.22 16V
R259 220K
R260 6.8K
R261 1K
RV252 4K
Q251 DTC114EL
R264 680
R263 470
C252 16V
D253 RD 4.7MB2
C254 0.01 25V
Q251 CHARGE/VTR SWITCH

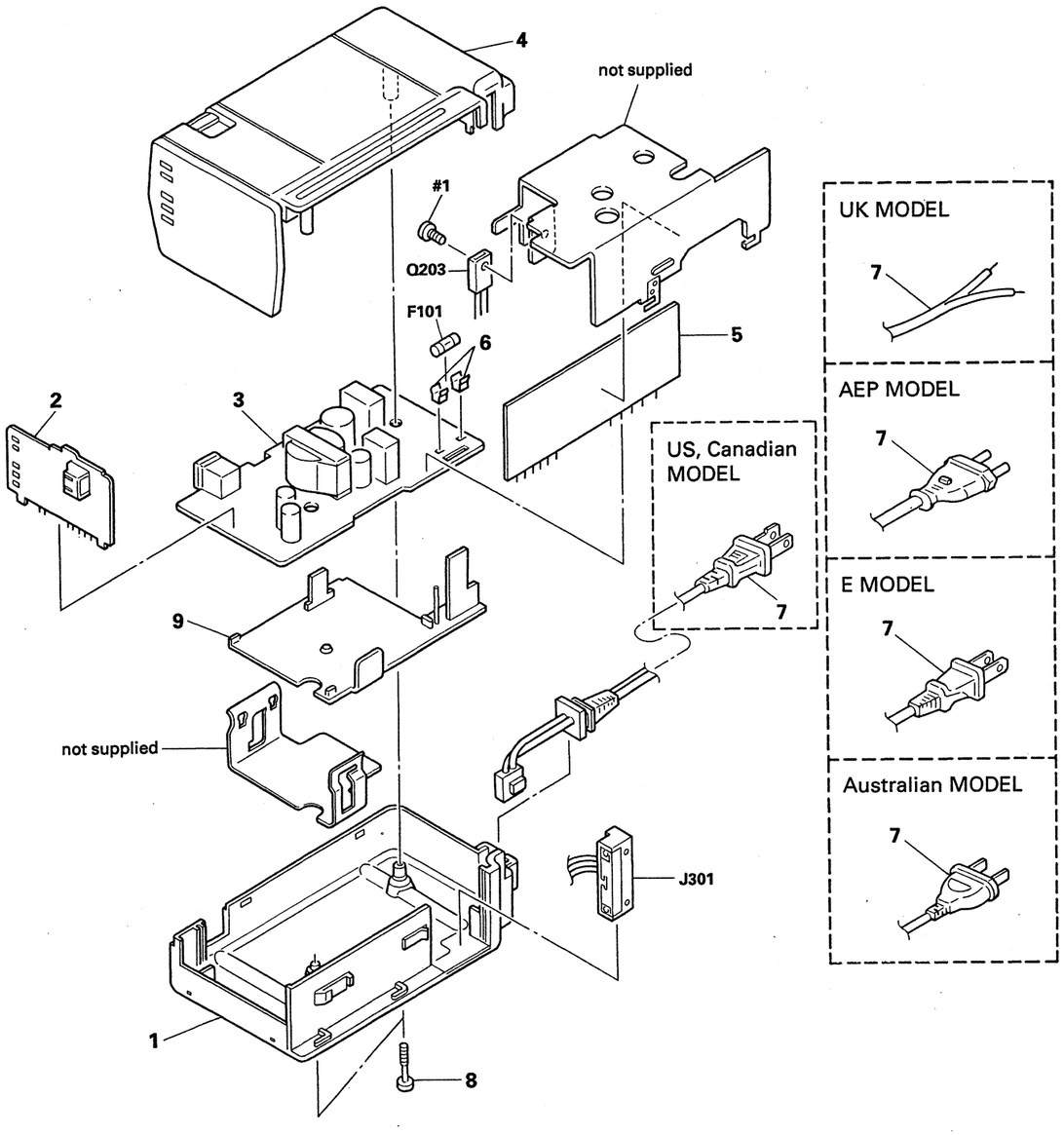
CH BOARD

SECTION 3
EXPLODED VIEW

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB,BALANCE(WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remarks
1	2-403-982-01	CASE KSP-ACC14-B	
* 2	A-4925-640-A	CH BOARD, COMPLETE	
* 3	A-4925-644-A	MB BOARD, COMPLETE (US, Canadian)	
* 3	A-4925-653-A	MB BOARD, COMPLETE (AEP)	
* 3	A-4925-656-A	MB BOARD, COMPLETE (UK)	
* 3	A-4925-659-A	MB BOARD, COMPLETE (E, Australian)	
4	A-4921-651-A	CASE ASSY, UPPER (US, Canadian)	
4	X-2400-119-1	CASE ASSY, UPPER CASE	(EXCEPT US, Canadian)
* 5	A-4925-648-A	PH BOARD, COMPLETE, ASSY (US, Canadian)	
* 5	A-4925-651-A	PH BOARD, COMPLETE (EXCEPT US, Canadian)	
6	1-533-213-31	FUSE, HOLDER	
⚠7	1-696-650-11	CORD, POWER (US, Canadian)	
⚠7	1-690-425-11	CORD, POWER (AEP, E)	
⚠7	1-690-423-12	CORD, POWER (Australian)	
⚠7		CORD, POWER (UK)	
8	2-434-757-01	SCREW TR B TAPPING 2.6X22	
* 9	2-433-022-01	SHEET, INSULATING IS-ACC14	
⚠F101	1-532-823-11	FUSE, GLASS TUBE (1.25A 250V)	(US, Canadian)
⚠F101	1-532-285-11	FUSE, TIME-LAG (T1.25A 250V)	(E, Australian)
⚠F101	1-576-226-11	FUSE (H.B.C.) (T1.25A 250V)	(AEP, UK)
J301	1-537-461-11	TERMINAL BOARD, BATTERY	

No.	Part No.	Description	Remarks
	2-403-982-01	CASE KSP-ACC14-B	
	A-4925-640-A	CH BOARD, COMPLETE	
	A-4925-644-A	MB BOARD, COMPLETE (US, Canadian)	
	A-4925-653-A	MB BOARD, COMPLETE (AEP)	
	A-4925-656-A	MB BOARD, COMPLETE (UK)	
	A-4925-659-A	MB BOARD, COMPLETE (E, Australian)	
	A-4921-651-A	CASE ASSY, UPPER (US, Canadian)	
	X-2400-119-1	CASE ASSY, UPPER CASE	(EXCEPT US, Canadian)
	A-4925-648-A	PH BOARD, COMPLETE, ASSY (US, Canadian)	
	A-4925-651-A	PH BOARD, COMPLETE (EXCEPT US, Canadian)	
	1-533-213-31	FUSE, HOLDER	
	1-696-650-11	CORD, POWER (US, Canadian)	
	1-690-425-11	CORD, POWER (AEP, E)	
	1-690-423-12	CORD, POWER (Australian)	
		CORD, POWER (UK)	
	2-434-757-01	SCREW TR B TAPPING 2.6X22	
	2-433-022-01	SHEET, INSULATING IS-ACC14	
01	1-532-823-11	FUSE, GLASS TUBE (1.25A 250V)	(US, Canadian)
01	1-532-285-11	FUSE, TIME-LAG (T1.25A 250V)	(E, Australian)
01	1-576-226-11	FUSE (H.B.C.) (T1.25A 250V)	(AEP, UK)
01	1-537-461-11	TERMINAL BOARD, BATTERY	

SECTION 4
ELECTRICAL PARTS LIST

CH

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- –XX, –X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref.No.	Part No.	Description			Remarks
*	A-4925-640-A	CH BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-164-004-11	CERAMIC CHIP 0.1uF	10%	25V	
C302	1-135-210-11	TANTALUM CHIP 4.7uF	20%	10V	
C303	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C304	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C305	1-164-004-11	CERAMIC CHIP 0.1uF	10%	25V	
C306	1-135-091-00	TANTALUM CHIP 1uF	20%	16V	
C307	1-164-232-11	CERAMIC CHIP 0.01uF		50V	
C308	1-135-210-11	TANTALUM CHIP 4.7uF	20%	10V	
		< CONNECTOR >			
CN301	1-750-005-21	CONNECTOR 4P			
		< DIODE >			
D301	8-719-941-09	DIODE DAP202U			
D302	8-719-941-86	DIODE DAN202U			
D303	8-719-941-86	DIODE DAN202U			
D304	8-719-105-63	DIODE RD4.3M-B1			
D305	8-719-941-86	DIODE DAN202U			
D306	8-719-941-86	DIODE DAN202U			
D307	8-719-941-86	DIODE DAN202U			
D308	8-719-941-86	DIODE DAN202U			
D309	8-719-106-45	DIODE RD9.1M-B3			
D310	8-719-941-86	DIODE DAN202U			
D311	8-719-106-88	DIODE RD15M-B1			
D312	8-719-106-88	DIODE RD15M-B1			
D313	8-719-404-22	LED LN1451C (F 90%)			
D314	8-719-404-22	LED LN1451C (CHARGE 80%)			
D315	8-719-404-22	LED LN1451C (E 50%)			
D316	8-719-029-89	LED LN1851C (VIDEO/CAMERA)			
D317	8-719-018-63	LED LN1351C (POWER)			
D318	8-719-941-86	DIODE DAN202U			
		< IC >			
IC301	8-759-098-97	IC TA78DS05F			
IC302	8-759-160-17	IC MB88212			
		< JUMPER RESISTOR >			
JW001	1-216-295-00	METAL CHIP 0	5%	1/10W	
JW002	1-216-295-00	METAL CHIP 0	5%	1/10W	
JW003	1-216-295-00	METAL CHIP 0	5%	1/10W	
		< TRANSISTOR >			
Q301	8-729-017-95	FET 2SJ299S-TR			
Q302	8-729-017-95	FET 2SJ299S-TR			
Q303	8-729-920-56	TRANSISTOR FMG1			
Q304	8-729-920-XX	TRANSISTOR DTA114EUT106			
Q305	8-729-907-00	TRANSISTOR DTC114EU			
Q306	8-729-925-46	TRANSISTOR IMB11-T110			
Q307	8-729-920-56	TRANSISTOR FMG1			
Q308	8-729-920-56	TRANSISTOR FMG1			
Q309	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q310	8-729-920-56	TRANSISTOR FMG1			
Q311	8-729-920-56	TRANSISTOR FMG1			
Q312	8-729-920-XX	TRANSISTOR DTA114EUT106			
Q313	8-729-907-00	TRANSISTOR DTC114EU			
Q314	8-729-907-00	TRANSISTOR DTC114EU			
Q315	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		< RESISTOR >			
R301	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R302	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R303	1-216-295-00	METAL CHIP 0	5%	1/10W	
R304	1-216-009-00	METAL CHIP 22	5%	1/10W	
R305	1-216-081-00	METAL CHIP 22K	5%	1/10W	
R306	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R307	1-216-073-00	METAL CHIP 10K	5%	1/10W	
R308	1-218-819-21	METAL CHIP 100	5%	1W	
R309	1-216-049-00	METAL CHIP 1K	5%	1/10W	
R310	1-216-049-00	METAL CHIP 1K	5%	1/10W	
R311	1-216-049-00	METAL CHIP 1K	5%	1/10W	
R312	1-216-069-00	METAL CHIP 6.8K	5%	1/10W	

CH MB

Ref. No.	Part No.	Description				Remarks
R313	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R314	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R315	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R316	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R317	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R318	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R319	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R320	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R321	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R322	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R323	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R324	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R325	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R326	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R327	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R328	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R329	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R330	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R331	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R332	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R333	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R334	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R335	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R336	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R337	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R338	1-216-295-00	METAL CHIP	0	5%	1/10W	
R339	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R340	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R341	1-216-089-00	METAL CHIP	47K	5%	1/10W	
		< VIBRATOR >				
X301	1-579-216-11	VIBRATOR, CERAMIC (4MHz)				
**********						
*	A-4925-644-A	MB BOARD, COMPLETE (US, Canadian)				
*	A-4925-653-A	MB BOARD, COMPLETE (AEP)				
*	A-4925-656-A	MB BOARD, COMPLETE (UK)				
*	A-4925-659-A	MB BOARD, COMPLETE (E, Australian)				
		**********				
		< CAPACITOR >				
⚠C101	1-137-525-51	FILM	0.1uF	20%	125V	(US, Canadian)
⚠C101	1-137-524-11	FILM	0.22uF	20%	125V (EXCEPT US, Canadian)	
⚠C102	1-161-742-00	CERAMIC	0.0022uF	20%	400V	
⚠C103	1-161-742-00	CERAMIC	0.0022uF	20%	400V	
C104	1-128-318-11	ELECT	47uF	99%	400V	
C105	1-126-233-11	ELECT	22uF	20%	50V	
C106	1-124-510-11	ELECT	220uF	20%	35V	
⚠C107	1-161-742-00	CERAMIC	0.0022uF	20%	400V	
⚠C108	1-161-742-00	CERAMIC	0.0022uF	20%	400V (EXCEPT US, Canadian)	
C201	1-165-375-91	CERAMIC	3300PF	10%	250V	
C202	1-165-375-91	CERAMIC	3300PF	10%	250V	
C203	1-124-791-11	ELECT	1.0uF	20%	100V	
C204	1-126-775-91	ELECT	1000uF			
C205	1-126-373-11	ELECT	470uF	20%	10V	
C206	1-136-165-00	FILM	0.1uF	5%	50V	
C207	1-136-165-00	FILM	0.1uF	5%	50V	
		< CONNECTOR >				
* CN101	1-564-321-00	PIN, CONNECTOR 2P				
		< JACK >				
CNJ201	1-695-651-11	SOCKET, EXTERNAL DC 3P(DC OUT 6.5V 1.5A)				
		< DIODE >				
⚠D101	8-719-510-43	DIODE	S1WB60B			
D102	8-719-970-02	DIODE	1SR139-400			
D103	8-719-948-45	DIODE	ERA22-08			
D201	8-719-948-45	DIODE	ERA22-08			
D202	8-719-911-19	DIODE	1SS119			
		< FUSE >				
⚠F101	1-532-823-11	FUSE, GLASS TUBE(1.25A 250V) (US, Canadian)				
⚠F101	1-532-285-11	FUSE, TIME-LAG(T1.25A 250V) (E, Australian)				
⚠F101	1-576-226-11	FUSE (H.B.C.) (T1.25A 250V) (AEP, UK)				
		< COIL >				
⚠L101	1-423-313-11	LFT (UU 10.5X5.3)				
L201	1-402-697-21	COIL, MOLDED CHOKE 4.7uH				
L202	1-424-361-11	FILTER, LINE				
		< TRANSISTOR >				
Q201	8-729-018-56	TRANSISTOR	DTA114GS			
Q202	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q203	8-729-017-92	FET	2SJ298			
		< RESISTOR >				
⚠R101	1-214-947-00	METAL	2.7M	1%	1/2W	
⚠R102	1-249-381-81	CARBON	1	5%	1/4W F	
⚠R103	1-205-990-11	WIREWOUND	3.3	5%	1.50W	
⚠R104	1-202-729-00	SOLID	6.8M	10%	1/2W (US, Canadian)	
⚠R201	1-249-451-11	CARBON	2.2	5%	1/4W	
R202	1-249-429-11	CARBON	10K	5%	1/4W	
R203	1-249-398-11	CARBON	27	5%	1/4W	
R204	1-249-417-11	CARBON	1K	5%	1/4W	
R205	1-249-429-11	CARBON	10K	5%	1/4W	
R207	1-249-425-11	CARBON	4.7K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

MB **PH**

Ref. No.	Part No.	Description	Remarks
R208	1-249-417-11	CARBON 1K 5% 1/4W	
R209	1-249-429-11	CARBON 10K 5% 1/4W	
		< TRANSFORMER >	
⚠T101	1-423-305-11	CVT (EGC2506088H) (EXCEPT AEP, UK)	
⚠T101	1-423-348-11	CVT (EGC2508088H) (AEP, UK)	
		< VARISTOR >	
⚠VDR101	1-809-337-31	VARISTOR (ENC471D-07A-TR-B)	
**********			
*	A-4925-648-A	PH BOARD, COMPLETE, ASSY (US, Canadian)	
*	A-4925-651-A	PH BOARD, COMPLETE (EXCEPT US, Canadian)	
		**********	
**********			

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
6	1-533-213-31	FUSE, HOLDER	
⚠7	1-690-425-11	CORD, POWER (AEP, E,)	
⚠7	1-696-650-11	CORD, POWER (US, Canadian)	
⚠7	1-690-423-12	CORD, POWER (Australian)	
⚠7		CORD, POWER (UK)	
J301	1-537-461-11	TERMINAL BOARD, BATTERY	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
⚠	1-569-008-11	ADAPTOR, CONVERSION 2P (E)	
⚠	1-573-856-11	ADAPTOR, CHANGE (US)	
	1-696-713-11	CORD, CONNECTION	
	3-755-603-21	MANUAL, INSTRUCTION (US, Canadian) (ENGLISH, FRENCH, SPANISH)	
	3-755-603-41	MANUAL, INSTRUCTION (EXCEPT US, Canadian) (ENGLISH, FRENCH, SPANISH, GERMAN)	
	3-755-603-51	MANUAL, INSTRUCTION (AEP, E) (DUTCH, SWEDISH, ITALIAN, ARABIC, CHINESE)	
	3-755-603-61	MANUAL, INSTRUCTION (AEP) (PORTUGUESE, FINNISH, DANISH)	
*	3-795-581-21	SAFEGUARD (SONY), IMPORTANT (US)	
**********			

HARDWARE LIST

#1	7-621-775-40	SCREW +B 2.6X8	

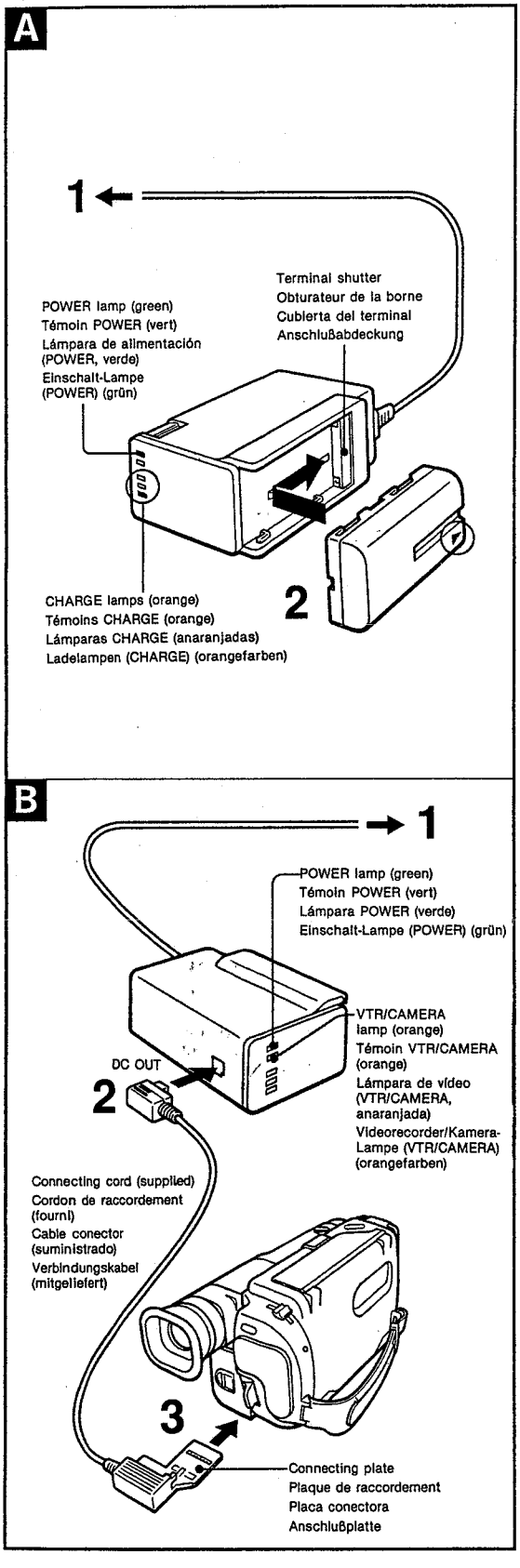
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

This section is extracted from instruction manual.

SECTION 5
GENERAL



To Charge the Battery Pack NP-500

Charging by Attaching the Battery Pack to This Unit

See illustration A.

— To quickly charge

1 Connect the power cord to a wall outlet.
The POWER lamp (green) will light.
2 Install the battery pack.
Align the end surface of the battery pack shown by the ▶ mark to the edge of the terminal shutter of this unit, then fit and slide the battery pack in the direction of the arrow.
The CHARGE lamps (orange) will flash or light and charging will bigin.

When the charging is completed, the CHARGE lamps go out. Remove the battery pack when required. Stopping charging before it is completed is also allowed.

To remove the battery pack
Slide the battery pack in the direction opposite to the arrow.

CHARGE lamps and charging time
Three CHARGE lamps show the process of charging. The relationships between the status of the CHARGE lamps and charging time are as follows.

Status of CHARGE lamps	Charging time
	less than 30 minutes
	about 30 minutes
	about 50 minutes
	about 1 hour 30 minutes

: not lit
: flash
: lit

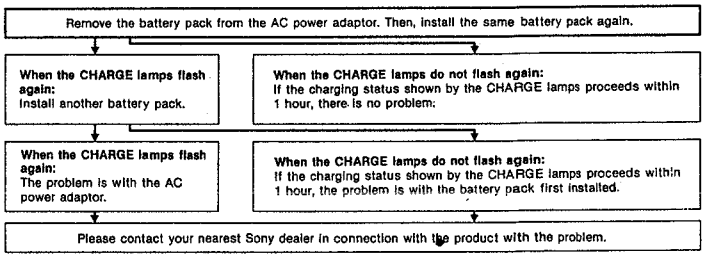
After the three CHARGE lamps lit, the lamps will go out about one hour later.

- To ascertain the battery life, refer to the instruction manual of the video equipment which you use.
- The charging time in the above table may differ depending on the condition of the battery pack or the termperature of the environment.

Notes

- When a fully charged battery pack is installed, the CHARGE lamps will once light, then go out.
- Charging is not performed during operation of the video equipment. If you operate the video equipment during charging, the charging will stop and the CHARGE lamps will go out.
- Keep the AC power adaptor away from video equipment if video operation is disturbed.

When the Three CHARGE Lamps Flash Simultaneously
Check through the following chart.


Remove the battery pack from the AC power adaptor. Then, install the same battery pack again.
When the CHARGE lamps flash again:
Install another battery pack.
When the CHARGE lamps do not flash again:
If the charging status shown by the CHARGE lamps proceeds within 1 hour, there is no problem.
When the CHARGE lamps flash again:
The problem is with the AC power adaptor.
When the CHARGE lamps do not flash again:
If the charging status shown by the CHARGE lamps proceeds within 1 hour, the problem is with the battery pack first installed.
Please contact your nearest Sony dealer in connection with the product with the problem.

Charging the Battery Pack in the Video Equipment

See illustration B.

— To use anytime you need

Set the battery pack into the video equipment. For detailed information, refer to the instruction manual of the video equipment which you use.
Use the supplied connecting cord.

1 Connect the power cord to a wall outlet.
The POWER lamp (green) will light.
2 Connect the connecting cord to the DC OUT connector of this unit.
3 Connect the connecting plate to the video equipment.

While the power of the video equipment is off, the battery pack in the video equipment is charged. In this case, the VTR/CAMERA lamp does not light.

Notes

- Charging of the battery pack in the video equipment will be stopped during operation of the video equipment.
- When another batter pack is attached to this unit, charging of the battery pack in the video equipment will be stopped, and restarted after completion of the charging of the battery pack which is attached to this unit.
- When the charging of the battery pack attached to this unit is completed or a video equipment is connected to this unit, the VTR/CAMERA lamp may light for a moment.

To Operate Video Equipment

See illustration B.

Use the supplied connecting cord.

1 Connect the power cord to a wall outlet.
The POWER lamp (green) will light.
2 Connect the connecting cord to the DC OUT connector of this unit.
3 Connect the connecting plate to the video equipment.

The VTR/CAMERA lamp (orange) will light during operation of the video equipment.

9-973-303-11

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Personal Video Group

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